

## CLAIMS:

1. A method of processing an information signal, the method comprising:
  - applying a signal modification process to an information signal resulting in a processed signal, said signal modification process being controlled by at least one control parameter;
  - 5 – comparing the processed signal with the information signal to determine a measure of perceptual quality of the processed signal;
  - adjusting said at least one control parameter in response to the determined measure of perceptual quality.
- 10 2. A method according to claim 1, further comprising dividing the information signal into a sequence of segments of the information signal;
  - wherein the step of applying the signal modification process comprises applying the signal modification process to a first one of said segments of the information signal resulting in a first segment of the processed signal;
  - 15 wherein the step of comparing the processed signal with the information signal comprises comparing said first segment of the processed signal with said first segment of the information signal;
  - and wherein the method further comprises applying at least a part of the signal modification process to a second one of said segments of the information signal resulting in a
  - 20 second segment of the processed signal, the at least part of the signal modification process being controlled by said adjusted at least one control parameter.
3. A method according to claim 2, wherein the second segment of the information signal is a segment subsequent to the first segment of the information signal in
- 25 the sequence of segments of the information signal.
4. A method according to claim 2, wherein the second segment of the information signal is the first segment of the information signal, the first segment of the information signal being delayed to compensate for a duration of the steps of comparing the

processed signal with the information signal and of adjusting the at least one control parameter.

5. A method according to claim 1, further comprising
- 5    – delaying the information signal to compensate for a duration of the steps of comparing the processed signal with the information signal and of adjusting the at least one control parameter; and
- applying at least a part of the signal modification process to the delayed information signal resulting in a modified processed signal, the at least part of the signal modification process being controlled by the adjusted at least one control parameter.
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6. A method according to any one of claims 1 through 5, wherein the signal modification process comprises
- determining a watermark signal according to a watermark embedding model;
- 15    – embedding the determined watermark signal in the information signal.
7. A method according to claim 4 or 5, wherein the signal modification process comprises
- determining a watermark signal according to a watermark embedding model;
- 20    – embedding the determined watermark signal in the information signal;
- wherein the step of embedding the determined watermark signal is controlled by the at least one control parameter; and wherein the step of applying at least a part of the signal modification process to the information signal comprises
- delaying the information signal resulting in a delayed signal; and
- 25    – embedding the determined watermark signal in the delayed signal, the embedding being controlled by the adjusted at least one control parameter.
8. A method according to claim 6 or 7, wherein the information signal is an audio signal and the watermark embedding model comprises a psycho-acoustic model of the human auditory system.
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9. A method according to any one of claims 1 through 5, wherein the information signal is an audio signal and the signal modification process comprises an audio coding process.

10. A method according to claim 4 or 5, wherein the information signal is an audio signal and the signal modification process comprises an audio coding process comprising
- determining a bit-allocation pattern for coding audio signal; and
  - 5 – performing a quantization of the audio signal according to the determined bit-allocation resulting in a quantized signal;
- wherein the step of comparing the processed signal with the information signal comprises
- reconstructing the audio signal from the quantized signal; and
  - comparing the reconstructed signal with the audio signal;
- 10 wherein the step of adjusting said at least one control parameter comprises adjusting the bit-allocation;
- and wherein the step of applying at least a part of the signal modification process to the information signal comprises
- delaying the audio signal resulting in a delayed signal; and
  - 15 – performing a quantization of the delayed signal according to the adjusted bit-allocation resulting in a processed quantized signal.
11. An arrangement for processing an information signal, the arrangement comprising:
- 20 – signal processing means for applying a signal modification process to an information signal resulting in a processed signal, said signal modification process being controlled by at least one control parameter;
  - means for comparing the processed signal with the information signal to determine a measure of perceptual quality of the processed signal; and
  - 25 – means for adjusting said at least one control parameter in response to the determined measure of perceptual quality.
12. A device comprising an arrangement according to claim 11.
- 30 13. A processed information signal generated by the method according to any one of claims 1 through 10.